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RAW SEQUENCE LISTING

DATE: 10/01/2001

PATENT APPLICATION: US/09/809,524B

TIME: 13:51:51

Input Set : A:\6114N.txt

Output Set: N:\CRF3\10012001\I809524B.raw

3 <110> APPLICANT: Lowery, David
5 Kennedy, Michael J
8 <120> TITLE OF INVENTION: Salmonella Vaccine Materials and Methods
11 <130> FILE REFERENCE: 28341/6114.N
C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/809,524B
C--> 15 <141> CURRENT FILING DATE: 2001-09-17
17 <150> PRIOR APPLICATION NUMBER: 60/190,178
19 <151> PRIOR FILING DATE: 2000-03-17
21 <160> NUMBER OF SEQ ID NOS: 30
23 <170> SOFTWARE: PatentIn Ver. 2.0
25 <210> SEQ ID NO: 1
27 <211> LENGTH: 779
29 <212> TYPE: DNA
31 <213> ORGANISM: Salmonella dublin
33 <400> SEQUENCE: 1
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39 aatggcgctgc ttatgtcact tacctttccc atattaccaa tcatttacca gcagaagatt 180
41 atgatgcata ttggtaaaga ttacagttgg ttagggttag tcaccggaga ggtgattatt 240
43 gggttttttaa ttgggttttg tgcggcggtt cccttttggg ccgttgatat ggcggggttt 300
45 ctgcttgata ctttacgtgg cgcgacaatg ggtacgatat tcaattctac aatagaagct 360
47 gaaacctcac tttttggctt gcttttcagc cagtttttgt gtgttatttt ctttataagc 420
49 ggcggcatgg agtttatatt aaacattctg tatgagtc atcaatattt accaccagg 480
51 cgtactttat tatttgaccg gcaattttta aaatataatc aggcagagtg gagaacgctt 540
53 tatcaattat gtgtcagttt ctctcttctt gccataatat gtatggtatt agccgatctg 600
55 gcttttaggtc ttttaaactg gtcggcaca caattgaatg tgtttttctt ctcaatgccg 660
57 ctcaaaagta tattggttct actgacgctc ctgatctcat tcccttatgc tcttcatcac 720
59 tatttggttg aaagcgataa attttatatt tatctaaaag actgggttcc atctgtatg 779
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66 <211> LENGTH: 779
68 <212> TYPE: DNA
70 <213> ORGANISM: Salmonella typhimurium
72 <400> SEQUENCE: 2
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76 agcctttctt tattacttcc cttattaaaa agtggcagtt taggggcccgc acttttacgt 120
78 aatggcgctgc ttatgtcact tacctttccg atattaccaa tcatttacca gcagaagatt 180
80 atgatgcata ttggtaaaga ttacagttgg ttagggttag tcaactggaga ggtgattatt 240
82 gggtttttcaa ttgggttttg tgcggcggtt cccttttggg ccgttgatat ggcggggttt 300
84 ctgcttgata ctttacgtgg cgcgacaatg ggtacgatat tcaattctac aatagaagct 360
86 gaaacctcac tttttggctt gcttttcagc cagttcttgt gtgttatttt ctttataagc 420
88 ggcggcatgg agtttatatt aaacattctg tatgagtc atcaatattt accaccagg 480
90 cgtactttat tatttgacca gcaattttta aaatataatc aggcagagtg gagaacgctt 540
92 tatcaattat gtatcagctt ctctcttctt gccataatat gtatggtatt agccgatctg 600
94 gcttttaggtc ttttaaactg gtcggcaca caattgaatg tgtttttctt ctcaatgccg 660
96 ctcaaaagta tattggttct actgacgctc ctgatctcat tcccttatgc tcttcatcac 720
98 tatttggttg aaagcgataa attttatatt tatctaaaag actgggttcc atctgtatg 779
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103 <211> LENGTH: 749

105 <212> TYPE: DNA

107 <213> ORGANISM: Salmonella dublin

109 <400> SEQUENCE: 3

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115 cagcatcata ttgatgcgga aaaaaaacag gaagaggacg gtgttacctt acgtgtcgag 180
117 cagtcgcagt ttattaatgc ggttgagcta cttagactta acggttatcc gcatcgtcag 240
119 ttacaacgg cggataagat gtttcggct aatcagttag tggatcacc ccaggaagaa 300
121 cagcagaaga ttaatttttt aaaagaacaa agaattgaag gaggctgag tcagatggag 360
123 ggcgtgatta atgcaaaagt gaccattgag ctaccgactt atgatgaggg aagtaacgct 420
125 tctccgagct cagttgccgt atttataaaa tattcaccac aggtcaatat ggaggccttt 480
128 cgggtaaaaa ttaaggattt aatagagatg tcaatccctg ggttgcaata cagtaagatt 540
130 agtatcttga tgcagcctgc tgaattcaga atggtagctg acgtaccgc gagacaaaca 600
132 ttctggatta tggacgttat caacgccaat aaagggaagg tggagaagtg gttgatgaaa 660
134 tacccttate agttgatgtt attgttgaca ggactgttat taggagtggg catcctgatc 720
136 ggctatTTTT gcctgagacg ccgtttttg 749

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138 <210> SEQ ID NO: 4

140 <211> LENGTH: 749

142 <212> TYPE: DNA

144 <213> ORGANISM: Salmonella typhimurium

146 <400> SEQUENCE: 4

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152 cagcatcata ttgatgcgga aaaaaaacag gaagaggatg gtgtaacctt acgtgtcgag 180
154 cagtcgcagt ttattaatgc ggttgagcta cttagactta acggttatcc gcataggcag 240
156 ttacaacgg cggataagat gtttcggct aatcagttag tggatcacc ccaggaagaa 300
158 cagcagaaga ttaatttttt aaaagaacaa agaattgaag gaatgctgag tcagatggag 360
160 ggcgtgatta atgcaaaagt gaccattgag ctaccgactt atgatgaggg aagtaacgct 420
162 tctccgagct cagttgccgt atttataaaa tattcacctc aggtcaatat ggaggccttt 480
164 cgggtaaaaa ttaagattt aatagagatg tcaatccctg ggttgcaata cagtaagatt 540
166 agtatcttga tgcagcctgc tgaattcaga atggtagctg acgtaccgc gagacaaaca 600
168 ttctggatta tggacgttat caacgccaat aaagggaagg tggagaagtg gttgatgaaa 660
170 tacccttate cgttgatgtt atcgttgaca ggactgttat taggagtggg catcctgatc 720
172 ggctatTTTT gcctgagacg ccgtttttg 749

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174 <210> SEQ ID NO: 5

176 <211> LENGTH: 1052

178 <212> TYPE: DNA

180 <213> ORGANISM: Salmonella dublin

182 <400> SEQUENCE: 5

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184 atggtagtaa ataaacgttt aatcttaatt ttactattta tactcaatac agcaaagagt 60
186 gatgagttat catggaaagg taatgacttc accctttatg ccagacaaat gccattagca 120
188 gaggttttac atctgctctc agagaactat gatacggcta ttactattag ccatttgata 180
190 acagctacat ttagtggaag aattccgcct ggaccaccgg tcgatatttt gaataacctg 240
191 gcagcacaat atgatttgct tacctggttt gatggcagca tgttatatgt atatcctgca 300
193 tcgttattaa aacatcagggt tatcactttt aatattttat ctactggacg gttcattcat 360
195 tacttacgca gccagaatat ctttcatca ccgggatgag aggttaaaga aattaccggg 420
197 accaaagctg tggagggtgag cgggtgtccc agctgcctga ctcgatttag tcaattagct 480
199 tcagtgtctg ataattgcgtt aatcaaacga aaagacagtg cgggtgagtgt aagtatatatc 540

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201 acgcttaagt atgccactgc gatggatacc caataccaat atcgcgatca gtccgtcgtg 600
203 gttccagggg tcgtgagtgt attgctgag atgagtaaaa ccagcgtacc ggcgtcatcg 660
205 acgaacaatg gttcaccgcg tacacaggca ttgcccatgt ttgctgccga cccacgccag 720
207 aatgcagtga tcgttcgtga ttatgcggcc aatatggccg ggtatcggaa acttatcaca 780
209 gaattagatc aacgccagca gatgatagag atttcggtga aaattatcga tgtaaatgct 840
211 ggagatatta accagttagg catcgactgg ggaacggcag tgcgctggg tggcaagaaa 900
213 attgcgttca atacagggtt gaatgacggg ggtgctagcg gttttttcaa cggtaatcag 960
215 cgatacctca aactttatgg tgcgtttgaa tgccctggaa aaaagctctc aggcttatgt 1020
217 actttcccag ccatctgtgg tgactttaaa ta 1052
219 <210> SEQ ID NO: 6
221 <211> LENGTH: 1052
223 <212> TYPE: DNA
225 <213> ORGANISM: Salmonella typhimurium
227 <400> SEQUENCE: 6
229 atggtagtaa ataaacgttt aatcttaatt ttactattta tactcaatac agcaaagagt 60
231 gatgagttat catggaaagg taatgacttc accctttatg ccagacaaat gccattagca 120
233 gaggttttac atctgctctc agagaactat gatacggcta ttactattag cccattgata 180
235 acagctacat ttagtggaag aattccgcct ggaccaccgg tcgatatttt gaataacctg 240
237 gcagcacaat atgatttgct tacctgggtt gatggcagca tgttatatgt atatcctgca 300
239 tcgttattaa aacatcagggt tatcactttc aatattttat ctactggacg gttcattcat 360
241 tacttacgca gccagaatat cctttcatca ccgggatgcg aggttaaaga aattaccggt 420
243 accaaagctg tggaggtgag cgggtgtccc agctgcctga ctcgattag tcaattagct 480
245 tcagtgcctg ataatgcgtt aatcaaacga aaagacagtg cggtgagtgt aagtatatac 540
247 acgcttaagt atgccactgc gatggatacc cagtaccaat atcgcgatca gtccgtcgtg 600
249 gttccagggg tcgttagtgt attgctgag atgagtaaaa ccagcgtccc gacgtcatcg 660
251 acgaacaatg gttcaccgcg tacacaggca ttgcccatgt ttgctgccga cccacgccag 720
253 aatgcagtga tcgttcgtga ttatgcggcc aatatggccg ggtatcggaa actcatcaca 780
254 gaattagatc aacgccagca gatgatagag atttcggtga aaattatcga tgtaaatgct 840
256 ggagatatta accagttagg catcgactgg ggaacggcag tgcgctggg tggcaagaaa 900
258 attgcgttca atacagggtt gaatgacggg ggtgctagtg gttttttcaa cggtaatcag 960
260 cgatacctca aactttatgg tgcgtctgaa tgccctggaa aaaagctctc aggcttatgt 1020
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266 <211> LENGTH: 368
268 <212> TYPE: DNA
270 <213> ORGANISM: Salmonella typhimurium
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274 atggattggg atctcattac tgaacgtaat attcagcttt ttattcaatt agcaggatta 60
276 gctgaacggc ctttagcaac caatatgttc tggcggcaag gacaatatga aacctatcta 120
278 aactatcata acggtcgtat tcaattatgt cagatactca agcaaaccct cttagacgaa 180
280 gaactgcttt ttaaagcggt ggctaactgg aaaccgcgag cgttccaggg tattcctcaa 240
282 cgattatttt tggtgcgcga tgggcttgca atgagttggt ctccacctct ttccagctcc 300
284 gccgagctct ggttacgatt acatcatcga caaataaaat ttctggagtc gcaatgcgtt 360
286 catggtta 368
288 <210> SEQ ID NO: 8
290 <211> LENGTH: 28
292 <212> TYPE: DNA
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:

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298 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
300 <400> SEQUENCE: 8
302 tggcttttat tgcaccattg agcctttc 28
304 <210> SEQ ID NO: 9
306 <211> LENGTH: 27
308 <212> TYPE: DNA
310 <213> ORGANISM: Artificial Sequence ✓
312 <220> FEATURE:
314 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
316 <400> SEQUENCE: 9
318 ttatcgctt tcaaccaa agtgcg 27
320 <210> SEQ ID NO: 10
322 <211> LENGTH: 34
324 <212> TYPE: DNA
326 <213> ORGANISM: Artificial Sequence ✓
328 <220> FEATURE:
330 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
332 <400> SEQUENCE: 10
334 gccaatctag aaattatttt cggaatttga taaa 34
336 <210> SEQ ID NO: 11
338 <211> LENGTH: 49
340 <212> TYPE: DNA
342 <213> ORGANISM: Artificial Sequence ✓
344 <220> FEATURE:
346 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
348 <400> SEQUENCE: 11
350 aggcgtgttct gttttctgc tcacattcaa ccagctctc caattcgta 49
352 <210> SEQ ID NO: 12
354 <211> LENGTH: 49
356 <212> TYPE: DNA
358 <213> ORGANISM: Artificial Sequence ✓
360 <220> FEATURE:
362 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
364 <400> SEQUENCE: 12
366 tacgaattgg agagcatggt tgaatgtgag cgagaaaaca gaacagcct 49
368 <210> SEQ ID NO: 13
370 <211> LENGTH: 34
372 <212> TYPE: DNA
374 <213> ORGANISM: Artificial Sequence ✓
376 <220> FEATURE:
378 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
380 <400> SEQUENCE: 13
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385 <211> LENGTH: 34
387 <212> TYPE: DNA
389 <213> ORGANISM: Artificial Sequence ✓
391 <220> FEATURE:
393 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓

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397 gccaatctag actgcagaac cgagccagga gcaa 34
399 <210> SEQ ID NO: 15
401 <211> LENGTH: 46
403 <212> TYPE: DNA
405 <213> ORGANISM: Artificial Sequence ✓
407 <220> FEATURE:
409 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
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413 cacctcggga tcaggtcggc tcataaaaaa ttaatcttct gctggt 46
415 <210> SEQ ID NO: 16
417 <211> LENGTH: 46
419 <212> TYPE: DNA
421 <213> ORGANISM: Artificial Sequence
423 <220> FEATURE:
425 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
427 <400> SEQUENCE: 16
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433 <211> LENGTH: 35
435 <212> TYPE: DNA
437 <213> ORGANISM: Artificial Sequence
439 <220> FEATURE:
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452 <213> ORGANISM: Artificial Sequence
454 <220> FEATURE:
456 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
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460 gccaatctag attcaaattg taagttttta tgtcaat 37
462 <210> SEQ ID NO: 19
464 <211> LENGTH: 50
466 <212> TYPE: DNA
468 <213> ORGANISM: Artificial Sequence
470 <220> FEATURE:
472 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
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476 ttatccagc acagcctgga tattacattt tataccccac ccgaataaag 50
478 <210> SEQ ID NO: 20
480 <211> LENGTH: 42
482 <212> TYPE: DNA
484 <213> ORGANISM: Artificial Sequence
486 <220> FEATURE:
488 <223> OTHER INFORMATION: Description of Artificial Sequence: primer ✓
490 <400> SEQUENCE: 20

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VERIFICATION SUMMARY

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L:13 M:270 C: Current Application Number differs, Replaced Application Number

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date